



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Tokuju OIKAWA

Serial No. 09/928,339

Group Art Unit: 1752

Filed: August 14, 2001

Examiner: Thorl Chea

For: PHOTOTHERMOGRAPHIC MATERIAL

DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks,
Washington, D.C. 20231

Sir:

I, Tokuju OIKAWA, a Japanese citizen, having a post office address of c/o Fuji Photo Film Co., Ltd., No.210, Nakanuma Minami-ashigara-shi, Kanagawa 250-0193 Japan, hereby declare and state that:

I graduated from Tohoku University, Graduate School/Faculty of Engineering, Course of Applied Physics in March, 1989, receiving a Master's Degree;

I was employed by Fuji Photo Co., Ltd., in April, 1989, and have been employed by said Company ever since; and

I have been engaged in research and development on silver halide photographic materials at the Ashigara Laboratories of said Company from April, 1989 to date.

I am the inventor of the above-identified application. I declare further that I have read all of the documents contained in the file wrapper of the above-entitled application.

I declare further that the test described below was conducted at my direction and under my supervision and the test results are true and correct to the best of my knowledge.

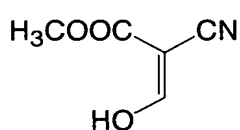
Method:

Sample Nos. 7 to 9, 12 to 14, and 17 to 19 shown in TABLE 1 in Inoue et al, U. S. Patent No. 6,100,022, hereinafter referred to as "022", were prepared in the same manner as Example 1 described in 022 (See columns 40 to 46 in 022). Sample Nos. 7A to 9A, 12A to 14A, and 17A to 19A were respectively prepared in the same manner as each of Sample Nos. 7 to 9, 12 to 14, and 17 to 19, except that SBR latex, which is same as that used as binder for an image-forming layer in Example 1 described in the original disclosure of the present application, was used as binder for an emulsion layer on an image-forming layer side of a support in place of LACSTAR 3307B in an amount equal to that of LASCSTAR 3307B, and NaOH was used as pH modifier.

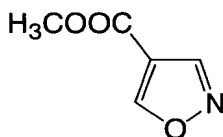
Sample No. I-2 was prepared in the same manner as Example I-2 described in Hirano U. S. Patent No. 6,165,707, hereinafter referred to as "707" (See columns 80 to 86 in 707). Sample No. I-2A was prepared in the same manner as Sample No. I-2, except that SBR latex, which is same as that used as binder for an image-forming layer in Example 1 described in the original disclosure of the present application, was used as binder for an emulsion layer on an image-forming layer side of a support in place of

LACSTAR 3307B in an amount equal to that of LASCSTAR 3307B, and NaOH was used as pH modifier.

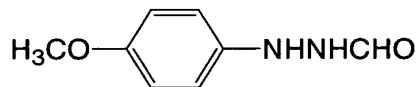
Sample Nos. 7 to 9 and Sample Nos. 7A to 9A contained Compound C-1 described below, which falls within the scope of the formula (1) defined in the pending claim1, as nucleating agent in the image-forming layer; and Sample Nos. 12 to 14 and Sample Nos. 12A to 14A contained Compound C-8 described below, which falls within the scope of the formula (2) defined in the pending claim 1, as nucleating agent in the image-forming layer. And Sample Nos. 17 to 19 and Sample Nos. 17A to 19A contained Compound H-1, which does not fall within any of the formula (1) to (3).



C-1

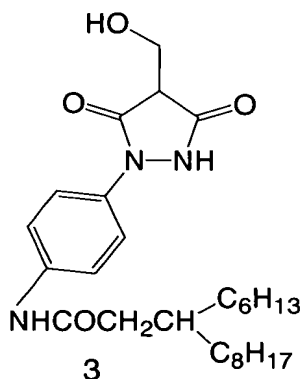


C-8



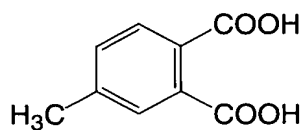
H-1

Sample Nos. I-2 and I-2A contained Compound 3 described below, which falls within the scope of the formula (3) defined in the pending claim 1, as nucleating agent in the image-forming layer.



3

All of samples prepared above contained Compound F described below, which falls within the scope of the formula (A) defined in the pending claim 1, in the image-forming layer.



F

The film surface pH of each of the obtained samples was measured at the time just behind preparation or at the time after being allowed to stand at 50 °C in 75 %RH for three days in the same manner as described on page 107 in the original disclosure of the present application.

The D_{\min} and D_{\max} of each of the obtained samples was measured at the time just behind preparation or at the time after being allowed to stand at 50 °C under 75 %RH for three days in the same manner as described on pages 102 and 103 in the original disclosure of the present application. The difference of line widths of each of the obtained samples was measured in the same manner as described on pages 102 and 103 in the original disclosure of the present application.

The results are shown in Table 1.

Table 1

Sample No.	NH ₄ ⁺ content (mmol/m ²)	Dmin (25°C80%)		Dmax (25°C10%)		Film Surface pH		Difference of line widths (μm)	Note
		Fr*1	50°C 75%RH 3days	Fr	50°C 75%RH 3days	Fr*1	50°C 75%RH 3days		
7	0.24	0.12	0.16	3.7	4.1	5.3	4.9	19	022* ²
8	0.24	0.12	0.16	3.7	4.1	6.0	5.5	19	022* ²
9	0.24	0.13	0.18	3.8	4.2	6.8	6.2	19	022* ²
7A	0.01	0.12	0.12	4.1	4.1	5.3	5.3	8	Invention(I/II)* ⁴
8A	0.01	0.12	0.12	4.1	4.1	6.0	6.0	8	Invention(I/II)* ⁴
9A	0.01	0.13	0.13	4.2	4.2	6.8	6.8	10	Invention(I/II)* ⁴
12	0.24	0.12	0.16	3.7	4.2	5.3	4.9	20	022* ²
13	0.24	0.12	0.16	3.8	4.1	6.0	5.5	19	022* ²
14	0.24	0.12	0.16	3.8	4.2	6.8	6.2	19	022* ²
12A	0.01	0.12	0.12	4.2	4.2	5.3	5.3	8	Invention(I/II)* ⁴
13A	0.01	0.12	0.12	4.1	4.1	6.0	6.0	8	Invention(I/II)* ⁴
14A	0.01	0.12	0.12	4.2	4.2	6.8	6.8	10	Invention(I/II)* ⁴
17	0.24	0.14	0.18	3.7	4.0	5.3	4.9	21	022* ²
18	0.24	0.14	0.19	3.7	4.1	6.0	5.5	20	022* ²
19	0.24	0.14	0.19	3.7	4.0	6.8	6.2	20	022* ²
17A	0.01	0.14	0.14	4.0	4.0	5.3	5.3	8	Invention(II)* ⁵
18A	0.01	0.14	0.14	4.1	4.1	6.0	6.0	8	Invention(II)* ⁵
19A	0.01	0.14	0.14	4.0	4.0	6.8	6.8	10	Invention(II)* ⁵
I-2	0.26	0.12	0.16	3.7	4.1	5.1	4.8	19	707* ³
I-2A	0.01	0.12	0.12	4.1	4.1	5.1	5.1	8	Invention(I/II)* ⁴

*1 means the value obtained at the time just behind preparation.

*2 means that the sample falls within the scope of the materials described in U.S. Patnet No. 6,100,022.

*3 means that the sample falls within the scope of the materials described in U.S. Patnet No. 6,165,707.

*4 means that the sample satisfied Condition I and Condition II defined in the pending claim 1

*5 means that the sample satisfied Condition II defined in the pending claim 1

As shown in the declaration under 37 CFR 1.132 submitted on November 22, 2002, LASCSTAR 3307B, which was used for preparing Sample Nos. 7 to 9, 12 to 14, 17 to 19 and I-2, is SBR latex containing NH₄OH as pH modifier. And as shown in the above table, the amounts of ammonium ion in all the layers formed on the image-forming layer side of Sample Nos. 7 to 9, 12 to 14, 17 to 19 and I-2 were 0.24 mmol/m², and thus Sample Nos. 7 to 9, 12 to 14, 17 to 19 and I-2 did not satisfy Condition I

defined in the pending claim 1. As shown in the above table, the film surface pH of the samples were changed after coating. Thus the samples did not satisfy Condition II defined in the pending claim 1.

On the other hand, SBR latex, which was used for preparing Sample Nos. 7A to 9A, 12A to 14A, 17A to 19A and I-2A, is as same as SBR latex used as a binder for an image-forming layer in Example 1 described in the original disclosure of the present application, has a glass transition temperature of 17 °C, was prepared by polymerization using $K_2S_2O_8$ as a polymerization initiator (See lines 1 to 4 on page 92 in the original disclosure), and does not contain NH_4OH as pH modifier. As shown in the above table, the amounts of ammonium ion in all the layers formed on the image-forming layer side of Sample Nos. 7A to 9A, 12A to 14A, 17A to 19A and I-2A were 0.01 mmol/m², and thus Sample Nos. 7A to 9A, 12A to 14A and I-2A satisfied Condition I defined in the pending claim 1. As shown in the above table, the film surface pH of Samples Nos. 7A to 9A, 12A to 14A, 17A to 19A and I-2A were unchanged after coating. Thus all of Samples Nos. 7A to 9A, 12A to 14A, 17A to 19A and I-2A satisfied Condition II defined in the pending claim 1.

As shown in the above table, differences of the line widths found for Sample Nos. 7A to 9A, 12A to 14A, 17A to 19A and I-2A, which fall within the scope of the pending claim 1, were much smaller than those found for Sample Nos. 7 to 9, 12 to 14, 17 to 19 and I-2, which fall within the scope of the materials described in 022 or 707 and do not fall within the scope of the pending claim 1. Thus, it is clear that the samples which fall within the scope of the pending claim 1, had much less temperature and humidity dependency than the samples, which fall within the scope of the materials described in 022 or 707.

I believe that no one skilled in the art could be motivated to prepare materials satisfying Condition I or II defined in the pending claim 1 even if reading 202 or 707, since there is no mention of Condition I or Condition II in 022 or 707. And I also believe that no one skilled in the art could have expected that the above mentioned excellent effects could be obtained by the pending claim 1 at the time that the claimed invention was made.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Dated 4/ March, 2004

Tokuju Oikawa

Tokuju OIKAWA